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Sistemik Derleme / Systematic Review

The Effect of the PLISSIT Model on Sexual Functions: A Systematic Review

PLISSIT Modelinin Cinsel Fonksiyonlar Üzerine Etkisi: Sistemik Derleme

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ABSTRACT

Aim: The aim of this systematic review is to determine the effects of the PLISSIT model (permission, limited, information, special suggestions, intensive therapy) on sexual functions.

Materials and Methods: The study was conducted by searching Google Scholar, Ulakbim, Web of Science, PubMed, and Science Direct electronic databases.

Results: It was observed within the scope of the systematic review that five of the studies assessed were conducted in Iran, and one of them was conducted in Turkey, and all of them were randomized controlled trials (RCT). The participant group was diverse. It was observed that the studies were conducted in quite various groups such as women who underwent hysterectomy, women with multiple sclerosis, HIV positive women, women who were in the postpartum period, pregnant women, and women with Type 2 diabetes.

Conclusion: Former studies showed that training and counseling programs basing on the PLISSIT model are effective in enhancing sexual functions.

Keywords: Sexuality, PLISSIT model, Sexual dysfunction, Sexual counseling.

ÖZET

Amaç: Bu sistemik derlemenin amacı, PLISSIT (permission, limited, information, special suggestions, intensive therapy) modelinin cinsel fonksiyonlar üzerine etkisini belirlemektir.

Gereç ve Yöntem: Çalışma, Google Scholar, Ulakbim, Web of Science, PubMed ve Science Direct elektronik veri tabanlarında taranarak yürütülmüştür.

Bulgular: Sistemik derleme kapsamında değerlendirilen çalışmaların beşinin İran'da, birinin Türkiye'de yapıldığı ve hepsinin randomize kontrollü çalışma (RKÇ) olduğu görülmüştür. Katılımcı grubu çeşitlilik göstermektedir. Çalışmaların histerektomi operasyon geçirmiş kadınlar, multiple sklerozlu kadınlar, HIV pozitifli kadınlar, doğum sonu dönemde olan kadınlar, gebe kadınlar, tip 2 diyabetli kadınlar gibi çok farklı gruplarda yapıldığı görülmüştür.

Sonuç: Yapılan çalışmalar PLISSIT modeline dayalı eğitim ve danışmanlık programlarının cinsel fonksiyonları geliştirmede etkili olduğunu ortaya koymaktadır.

Anahtar Kelimeler: Cinsellik, PLISSIT model, Cinsel işlev bozukluğu, Cinsel danışmanlık

INTRODUCTION

Sexuality is a fundamental component of life that affects an individual biologically, socially, and culturally (Banaei et al., 2018). Sexual health is not merely the absence of sexual dysfunction, but also a multidimensional and natural process of human life covering a complex, different, and wide area and ranging from childhood to old age (WHO, 2017). Sexual dysfunction shows disturbing trends and psychosocial changes in traits related to the sexual response cycle, which has decisive effect on people's contentment, standard of living, and way of life (Black & Grant, 2014). While sexual dysfunctions are more common in women, the most common types of sexual dysfunctions in women and men are low sexual desire and premature ejaculation, respectively, and their frequencies vary by sex, age, diseases, and different cultural and social structures (McCabe et al., 2016).

Sexual dysfunction was determined in 54% of women in Jordan (Maaita et al., 2018), in 75% of women in Iran, (Direkvand-Moghadam, Suhrabi, Akbari, & Direkvand-Moghadam, 2016), in 63% of women in China (Lou et al., 2017), in 35% of women in Mexico City (López-Maguey et al., 2018), in 37% of women in Portugal (Peixoto & Nobre, 2015) and, in 53.2% of women in Turkey (Kılıç, 2019). Regardless of sex, one in three people all over the world experience sexual dysfunction during any period of their lives (Worsley, Bell, Gartoulla, & Davis, 2017).

Sexual life, which is an integral part of general health, remains the most neglected, unheeded, and secondary problematic area in today's health care system (McCabe et al., 2016). Studies have shown that although nurses agree that sexuality assessment and counseling services are within their professional roles, they are not able to completely fulfill these roles (Pinar, 2010). It is also stated that they do not know enough about the subject and feel uncomfortable discussing sexual issues with their patients (Ozan, Duman, & Çiçek, 2019). However, it should be noted that sexuality is one of the basic life requirements. Therefore, it is a requirement that nurses receive training in order to improve their sexual counseling roles (Sung, Jiang, Chen, & Chao, 2016).

Various management strategies are attainable to deal with some problems such as behavioral and psychological problems, medication plans and sexual dysfunction, and researchers employ educating and counseling mediation for this

purpose (Taylor et al., 2013). One of the most commonly used interventions is the PLISSIT model. In this model, it is aimed to cooperate with individuals with sexual problems to solve their problems. The model consists of four levels: P - permission, LI - limited information, SS - specific suggestions, IT – Intensive Therapy (Taylor & Davis, 2006). Talking about sexuality with individuals with sexual problems and encouraging sexual practices with safe counseling services will be of significant benefit to health professionals for identifying and resolving existing or possible sexual problems (Hakanson, Douglas, Robertson, & Lester, 2014). Therefore, this systematic review aimed to find out the effects of the PLISSIT model on sexual functions. For this purpose, the answer to the question ‘What are the effects of the PLISSIT model on sexual functions?’ has been sought.

MATERIALS AND METHODS

This systematic review has been prepared according to the guide PRISMA-P (Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols) (Moher, Liberati, Tetzlaff, & Altman, 2009).

Search Strategy

The articles comprised in this systematic review were searched in Google Scholar, Ulakbim, Web of Science, PubMed, and Science Direct electronic databases between June 31, 2019 and July 31, 2019. The MeSH terms “sexuality,” “PLISSIT model,” and “sexual dysfunction” and the words “cinsellik” (sexuality in Turkish), “cinsel işlev bozukluğu” (sexual dysfunction in Turkish), and “PLISSIT modeli” (PLISSIT model in Turkish) were used in the searches. A total of 2314 studies were accessed at the end of the search. Duplications (repeated studies) were determined with the EndNoteX9 software. As a result of the review made according to the title, summary and full text, we included 6 articles in this systematic review.

Inclusion Criteria

The inclusion criteria in the systematic review are defined according to PICOS (P: Population, I: Interventions, C: Comparisons, O: Outcomes, S: Study designs) (JBI, 2014).

P: The participants were married and sexually active individuals with sexual dysfunction. There were no restrictions on sex, socio-economic status, and ethnicity.

I: In the sexual dysfunction management, training and counseling relied on the PLISSIT model were determined as the intervention.

C: In the sexual dysfunction management, the practice and effectiveness of the PLISSIT model were compared with other conditions.

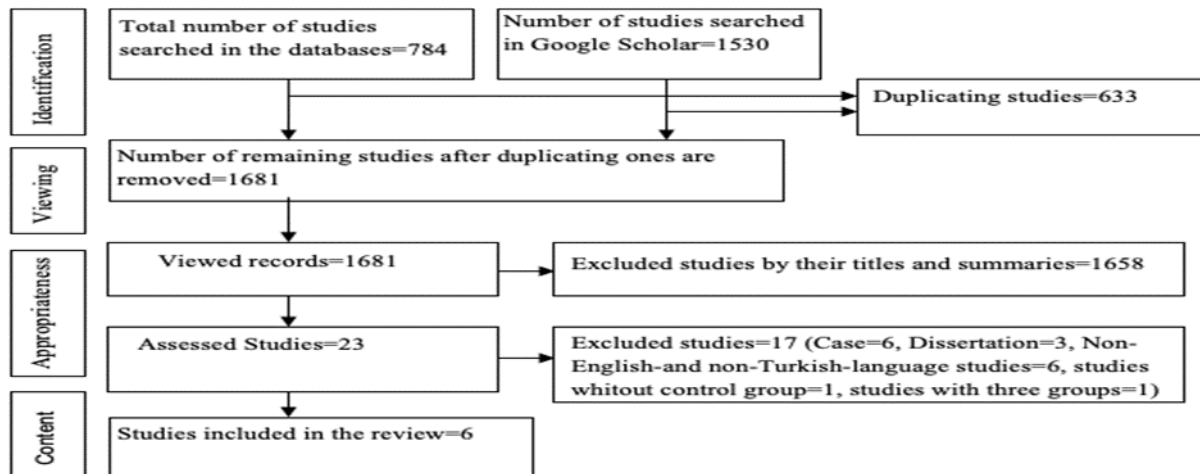
O: Studies evaluating the state of change in sexual functions before and after the PLISSIT model intervention have been included.

S: Randomized controlled trials (RCT) were included in the review. The studies, the full text of which could be accessed, published in the last ten years (2009-July 2019), and written in English or Turkish were included.

Studies whose full texts cannot be accessed and that are without control group, three groups, cases, and dissertations were not included in the systematic review.

Selection of the Studies

After accessing the studies from the databases and extracting the repeated studies with the EndNote X9 software, the titles and abstracts of the articles were examined by the second researcher to access possible studies. The first researcher also read and evaluated the titles and abstracts of the articles. The researchers have reviewed the studies whose full texts were accessed and that met the inclusion criteria and reached a consensus. This process is given in Figure 1 in line with the PRISMA flow chart together with the quantitative data.



Exclusion Criteria

Figure 1. The selection and inclusion process of the studies

Methodological Quality Assessment

The methodological quality of the 6 studies included in the systematic review was evaluated by the second researcher and controlled by the first researcher. Meta-analysis of Statistics Assessment and Review Instrument (MAStARI) critical appraisal tools of the Joanna Briggs Institute (JBI) have been used according to the selected types of research (Moher et al., 2009). For each item in the JBI-MAStARI checklists, the answer “Yes” is evaluated by 1 point, while the answer “No,” “Unclear,” and “Not Applicable” are evaluated by 0 points. The MAStARI Critical Assessment score of the Checklist for Randomized Controlled Trials varies between 0 and 13 points. A high total score refers to the high methodological quality of a study (Nahcivan & Seçginli, 2017). In this systematic review, it was found as a result of the assessment that the highest

quality score was 11 and the lowest was 9 (Table 1).

Extraction and Analysis of the Data

The data extraction form developed by the researchers was employed to summarize the data and they were assessed accordingly. The contents of the data extraction form included information about the authors and the dates of the articles, the countries in which the studies were conducted, their types, sampling characteristics, interventions, measurement tools, and the effect of the PLISSIT model.

Table 1. Characteristics of the Studies Included in the Review

Author, year, and country	Study type	Sample characteristics	Sexual function measurement tools	Intervention	Effect of the PLISSIT model	Quality score
Tütüncü & Yıldız, (2012) Turkey (23)	RCT	Women who underwent hysterectomy (n:70) Experimental group: 35 Control group: 35	Personal information form FSFI, a total score of 26,55 or lower indicated FSD	The experimental group was trained with the PLISSIT model. The control group was given routine care.	Sexual functions improved.	9
Khakbazan et al., (2016) Iran (24)	RCT	Married and sexually active women with multiple sclerosis (n:88) Experimental group:43 Control group:45	Personal information form FSFI, a total score of 28 or lower indicated FSD	Counseling with the PLISSIT model was given to the experimental group. No application has been made to the control group.	Sexual functions improved. Sexual desire, arousal, orgasm, and sexual satisfaction increased, vaginal dryness problems, except for pain, decreased.	10
Asadi et al., (2018) Iran (21)	RCT	Married HIV -positive women (n:60) Experimental group:30 Control group:30	Personal information form FSFI, a total score under 28 indicated FSD	Counseling with the PLISSIT model was given to the experimental group. The control group was given routine care.	Sexual functions improved. Sexual desire, arousal, orgasm, and sexual satisfaction increased, vaginal dryness and pain problems decreased.	9
Banaei et al., (2018) Iran (1)	RCT	Women in the postpartum period (n:87) Experimental group: 44 Control group: 43	Personal information form FSFI, a total score under 28 indicated FSD	Counseling according to the first two steps of the PLISSIT model was given to the experimental group. The control group was given routine care.	Sexual functions improved.	9
Mehrabi et al., (2019) Iran (22)	RCT	Women with Type 2 diabetes (n:100) Experimental group: 50 Control group: 50	Personal information form FSFI, a total score under 28 indicated FSD	Counseling with the PLISSIT model was given to the experimental group. No application has been made to the control group.	Sexual functions improved. Sexual desire, arousal, orgasm, and sexual satisfaction increased, vaginal dryness problems, except for pain, decreased.	11
Shahbazi, et al., (2018) Iran (25)	RCT	Pregnant women (n:68) Experimental group:33 Control group: 35	Personal information form FSFI, a total score of 28 or lower indicated FSD	Counseling with the PLISSIT model was given to the experimental group. The control group was given routine care.	Sexual functions improved. Sexual desire, arousal, orgasm, and sexual satisfaction increased, pain problems, except for vaginal dryness, decreased.	10

FSFI: Female Sexual Function Index; RCT: Randomized Controlled Trial

RESULTS

The findings from the studies were grouped under these headings: “Characteristics of the studies,” “Measurement tools,” “Intervention and procedure,” and “The Effect of PLISSIT model-based training and counseling on sexual functions.”

Characteristics of the Studies

A total of 6 articles were included in this systematic study to find out the effect of the PLISSIT model on sexual functions. Five of the studies were conducted in Iran and one in Turkey between 2009 and 2019, all of which were randomized controlled trials. The participant group is diverse. The studies were conducted in very different groups such as women who underwent hysterectomy, women with multiple sclerosis, HIV positive women, women who were in the postpartum period, pregnant women, and women with type 2 diabetes. The least number of samples in the studies was 60 (Asadi et al., 2018) and the highest was 176 (Mehrabi, Lotfi, Rahimzadeh, & Khoei, 2019) (Table 1).

Sexual Function Measurement Tools and Their Characteristics

Female Sexual Function Index (FSFI), which assesses the effect of the PLISSIT model on sexual functions, was used in all articles included in the systematic review. FSFI is a 19-item Likert-type scale that evaluates sexual dysfunction in women. The scale includes six domains: desire, arousal, lubrication, orgasm, satisfaction, and pain. Each item is scored from 0 or 1 to 6. The lowest score is 2 and the highest score is 36, with a higher score meaning better function (Rosen et al., 2000).

Intervention and Procedure

In Tütüncü and Yıldız’s (2012) study, in which the effect of the PLISSIT model on sexual functions in women who underwent hysterectomy was assessed, the experimental group was given 2 sessions of training based on the PLISSIT model and the control group was provided with routine treatment. In Khakbazan et al.’s (2016) study, which assessed the effect of the PLISSIT model on sexual functions in married and sexually active women with multiple sclerosis, the experimental group was given 4 sessions of counseling based on the PLISSIT model, and no applications were made to the control group. In Asadi et al. (2018) study, which assessed the effect of the PLISSIT model on sexual functions in married HIV-

positive women, the experimental group was given 2 sessions of counseling based on the PLISSIT model, while the control group was given routine care. In Banaei et al. (2018) study, which assessed the effect of the PLISSIT model on sexual functions in women in the first six months after birth, the experimental group was given 1 session of counseling according to the first two steps of the PLISSIT model and the control group was given routine care. In Mehrabi et al. (2019) study, which assessed the effect of the PLISSIT model on sexual functions of women with Type 2 diabetes, the experimental group was given 3 sessions of counseling based on the PLISSIT model, while no application was made to the control group. In Shahbazi et al. (2018) study, which assessed the effect of the PLISSIT model on sexual functions of pregnant women, 4 sessions of counseling were given to the experimental group based on the PLISSIT model, while routine care was given to the control group.

The Effect of PLISSIT Model-based Training and Counseling on Sexual Functions

In Tütüncü and Yıldız’s (2012) study, FSFI total mean scores of the experimental group (25.1) and control group (23.2) were similar before the intervention, and there was no statistically significant difference between the FSFI total mean scores. After the intervention, the FSFI total mean score (25.3) of the experimental group was found to be higher than that of the control group (15.6) and a statistically significant difference was found between the FSFI total mean scores. It was observed that the scores of the experimental group, which received care with the PLISSIT model, increased. In Khakbazan et al. (2016) study, the FSFI total mean scores of the experimental group (21.1) and control group (22.1) were low before the intervention, both groups experienced sexual dysfunction, and there was no statistically significant difference between the FSFI total mean scores. 3 months after the intervention, the total mean score of FSFI increased in the experimental group (25.3), remained low in the control group (15.6), and a statistically significant difference was found between the total mean scores of FSFI. The mean scores of sexual desire, arousal, lubrication, orgasm, and sexual satisfaction of the experimental group were found to statistically significantly increase when compared with the control group. It was observed that the scores of the experimental group that received care with the PLISSIT model increased. Except for pain, the

domains of FSFI including sexual desire, arousal, lubrication, orgasm, and sexual satisfaction in the experimental group showed improvement. In Asadi et al. (2018) study, the FSFI total mean scores of the experimental group (23.8) and control group (23.6) prior to intervention were found to be low, both groups experienced sexual dysfunction, and no statistically significant difference was found between the FSFI total mean scores. 3 months after the intervention, the total mean score of FSFI increased in the experimental group (28.9), remained low in the control group (21.9), and a statistically significant difference was found between the total mean scores of FSFI. The mean scores of sexual desire, arousal, lubrication, orgasm, sexual satisfaction, and pain of the experimental group were found to increase statistically significantly when compared with the control group. It was observed that the scores of the experimental group that received care with the PLISSIT model increased. In the experimental group, improvements were observed in the domains of FSFI including sexual desire, arousal, lubrication, orgasm, sexual satisfaction, and pain. Banaei et al. (2018) study showed that FSFI total average scores of the experimental group (19.3) and control group (20.5) were low before the intervention, both groups experienced sexual dysfunction, and there was no statistically significant difference between the FSFI total mean scores. After 4 weeks after the intervention, FSFI total mean scores increased in the experimental group (27.9), remained low in the control group (22.4), and statistically significant differences were found between the FSFI total mean scores. It was observed that the scores of the experimental group that received care with the PLISSIT model increased. In Mehrabi et al. (2019) study, prior to the intervention, FSFI total mean scores of the experimental group (22.9) and control group (23.0) were found to be low, both groups experienced sexual dysfunction, and there were no statistically significant differences between the FSFI total mean scores. 8 weeks after the intervention, the total mean score of FSFI increased in the experimental group (27.1), remained low in the control group (23.8), and statistically significant differences were found between FSFI total mean scores. The mean scores of sexual desire, lubrication, orgasm, and sexual satisfaction of the experimental group were found to increase statistically significantly when compared with the control group. It was observed that the scores of the experimental group that received maintenance with the PLISSIT model

increased. Except for arousal and pain, the domains of FSFI including sexual desire, lubrication, orgasm, and sexual satisfaction in the experimental group improved. In Shahbazi et al. (2019) study, prior to the intervention, FSFI total mean scores of the experimental group (19.3) and control group (22.1) were found to be low, both groups experienced sexual dysfunction, and there were no statistically significant differences between the FSFI total mean scores. 4 weeks after the intervention, the total mean score of FSFI increased in the experimental group (29.8), remained low in the control group (21.7), and statistically significant difference was found between the total mean scores of FSFI. The mean scores of sexual desire, arousal, lubrication, orgasm, sexual satisfaction, and pain of the experimental group were found to increase statistically significantly when compared with the control group. It was observed that the scores of the experimental group that received maintenance with the PLISSIT model increased. In the experimental group, the domains of FSFI including sexual desire, arousal, lubrication, orgasm, sexual satisfaction, and pain improved.

DISCUSSION

Sexual problems, which can have very destructive effects for men and women, decrease individuals' self-confidence and quality of life and significantly affect their mental status (Black & Grant, 2014), but studies show that sexual health is not adequately assessed by health professionals. However, especially model-supported guides are tools that enable nurses to discuss sexual health issues with their patients and provide an effective assessment (Evcili & Demirel, 2018). In this context, the use of models can be said to be an approach that removes barriers in assessing sexual health and providing sexual counseling services for nurses. The PLISSIT model, one of the tools used to solve problems related to sexuality, has been proven to improve the sexual function of women with gynecologic cancer who underwent hysterectomy (Nho, 2013), women with chronic diseases (Kars Fertelli, 2019), women in the postpartum period (Torkzahrani, Azad, Ozgoli, Banaei, & Mahmoudikohani, 2016), and pregnant women (Nejati et al., 2017). It was also revealed that nurses can use the PLISSIT model as a guide in addressing sexual problems and plan nursing interventions accordingly. The use of this model is recommended in addressing and solving sexual problems.

In women with gynecologic cancer, a group of whom underwent hysterectomy, the PLISSIT model has been found to improve sexual functions, increase sexual desire, sexual arousal, orgasm, and sexual satisfaction, and reduce vaginal dryness and pain problems (Nho, 2013). According to the findings of the systematic review, the PLISSIT model was found to improve sexual function in women who underwent hysterectomy in Tütüncü and Yıldız's (2012) study.

The PLISSIT model can be used to solve the sexual problems of people with chronic diseases (Rutte et al., 2015). Kars Fertelli et al. (2019) found in their study that the PLISSIT model improves sexual functions in women with rheumatoid arthritis, increases sexual desire and arousal, except for orgasm and sexual satisfaction, reduces pain problems other than vaginal dryness. In Khedr and Metwally's (2018) study, it was found that the PLISSIT model improves sexual functions in women with Type 2 diabetes, increases sexual desire, orgasm, and sexual satisfaction other than sexual arousal, and reduces the problem of vaginal dryness other than pain. According to the findings of the systematic review; in Mehrabi et al. (2019) study the PLISSIT model was found to improve sexual functions, increase sexual desire, orgasm, and sexual satisfaction other than sexual arousal, and reduce the problem of vaginal dryness other than the pain in women with Type 2 diabetes. Khakbazan et al. (2016) found in their study that in married and sexually active women with multiple sclerosis, the PLISSIT model improved sexual functions, increased sexual desire, sexual arousal, orgasm, and sexual satisfaction, and reduced vaginal dryness problem other than pain. Asadi et al. (2018) found that in married HIV-positive women, the PLISSIT model improved sexual functions, increased sexual desire, sexual arousal, orgasm, and sexual satisfaction, and reduced vaginal dryness and pain problems.

Nejati et al. (2017) found that the PLISSIT model improved sexual functions in pregnant women. Similarly, Heidari et al. (2017) also found that the PLISSIT model improved sexual functions in pregnant women and their partners. According to the findings of the systematic review, Shahbazi et al. (2019) found that in pregnant women, the PLISSIT model improved sexual functions, increased sexual desire, sexual arousal, orgasm, and sexual satisfaction, and reduced pain problems other than vaginal

dryness.

Torkzahrani et al. (2016) reported that the PLISSIT model improved sexual functions in nursing women in the postpartum period. According to the findings of the systematic review; Banaei et al. (2018) found that the PLISSIT model improved sexual functions in postpartum women. The studies included in the systematic review revealed that the care, training, and counseling provided with the PLISSIT model are effective in solving sexual problems. As a matter of fact, the studies included in the systematic review support the findings of the related studies.

CONCLUSION

It was concluded that the care, training, and counseling provided with the PLISSIT model improved sexual function. Also, the PLISSIT model has been a guide for nurses and other health professionals in identifying problems of individuals with sexual problems and planning appropriate interventions. In conclusion, the PLISSIT model can be used as an effective guide for assessing sexuality in nursing practice. For this purpose, courses and in-service training programs can be useful.

Author Contributions

Idea/Concept: E. E.; Design: S. K., E. E.; Supervision/Consulting: E. E.; Analysis and/or Interpretation: S. K., E. E.; Literature Search: S. K., E. E.; Writing the Article: S. K.; Critical Review: E. E.

Peer-review

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Conflict of Interest

The authors have no conflict of interest to declare

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